Biodiversity Data Journal 1: e963
doi: 10.3897/BDJ.1.e963

open access

Taxonomic paper

A new species of *Tychobythinus* Ganglbauer, 1896 (Coleoptera: Staphylinidae: Pselaphinae) from Turkey

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Academic editor: Lyubomir Penev

Received: 27 Jul 2013 | Accepted: 20 Aug 2013 | Published: 16 Sep 2013

Citation: Bekchiev R (2013) A new species of *Tychobythinus* Ganglbauer, 1896 (Coleoptera: Staphylinidae: Pselaphinae) from Turkey. Biodiversity Data Journal 1: e963. doi: 10.3897/BDJ.1.e963

ZooBank: urn:lsid:zoobank.org:pub:10D15B13-66F8-4513-8F0B-1604875FFA85

Abstract

A new species of the genus *Tychobythinus* Ganglbauer, 1896, *T. oculatus* sp. n., is described from near Köyceğiz, Muğla Province, in southwestern Turkey. The new species is morphologically closely related to *T. abnormipes* Reitter, 1910, and *T. pauper* Kiesenwetter, 1858, but can be readily distinguished from both by having very simplified internal armature of the aedeagus, and by the specific shape of the gular depression.

Keywords

Pselaphinae, Bythinini, *Tychobythinus oculatus*, new species, taxonomy, Turkey, Asia

Introduction

The genus *Tychobythinus* includes about 84 known species from the Palaearctic region (Besuchet 2008, Hlaváč and Jalžić 2009, Löbl and Besuchet 2004). Almost all species are rarely collected and have limited distribution. Up to now only one species is known from Turkey (Besuchet 1978). A second species from Turkey was discovered in the collection of the Museum für Naturkunde der Humboldt Universität in Berlin and is described here as

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Tychobythinus oculatus sp. n. The new species differs from all known congeners mainly by the shape of gular region, and the aedeagus.

Materials and methods

Dissections were made using standard techniques. Genitalia and small parts were mounted in Euparal or Canada balsam on acetate labels which are pinned with the specimens. All photos were taken with a Zeiss Stemi 2000 microscope equipped an AxioCam ERc 5s camera. Image stacks were processed using COMBINE ZP (Hadley 2010).

The material used for this study is deposited in the following collections:

MNHB – Museum für Naturkunde der Humboldt Universität zu Berlin, Germany (Johannes Frisch)

NMNHS – National Museum of Natural History, Sofia, Bulgaria

PCVB – Personal collection Volker Brachat, Geretsried, Germany

Taxon treatment

Tychobythinus oculatus Bekchiev, sp. n.

- ZooBank A3498013-439A-4B8B-B49C-AF10425DED1C

Materials

Holotype:

a. country: Turkey; verbatimLocality: Muğla, SE Köyceğiz; verbatimElevation: 10 m; locationRemarks: flood-plain wood; verbatimLatitude: 36°56'50"N; verbatimLongitude: 28° 43'56"E; eventDate: 28.03.2002; individualCount: 1; sex: male; recordedBy: P. Wunderie, V. Assing; institutionCode: MNHB

Paratypes:

a. country: Turkey; verbatimLocality: Muğla, SE Köyceğiz; verbatimElevation: 10 m; verbatimLatitude: 36°56'50"N; verbatimLongitude: 28°43'56"E; eventDate: 28.03.2002; individualCount: 3; sex: 2 males, 1 female; recordedBy: P. Wunderie, V. Assing; institutionCode: MNHB

b. country: Turkey; verbatimLocality: Muğla, SE Köyceğiz; verbatimElevation: 10 m; verbatimLatitude: 36°56'50"N; verbatimLongitude: 28°43'56"E; eventDate: 28.03.2002; individualCount: 2; sex: males; recordedBy: P. Wunderie, V. Assing; institutionCode: NMNHS

c. country: Turkey; verbatimLocality: Muğla, SE Köyceğiz; verbatimElevation: 10 m; verbatimLatitude: 36°56'50"N; verbatimLongitude: 28°43'56"E; eventDate: 28.03.2002; individualCount: 7; sex: 2 males, 5 females; recordedBy: P. Wunderie, V. Assing; institutionCode: PCVB

Description

Male: Body dark brown (Fig. 1a); pubescent with short, golden semierect setae and some long, erect setae. Length 1.10-1.19 mm. Head (Fig. 1b) wider than long (0.25/0.20 mm), covered with dense, semierect setae. Frontal rostrum distinctly wider than long (0.13/0.07 mm); antennal tubercles well-developed, median depression shallow. Vertex convex, with distinct median ridge. Ventral side of the head with narrow and deep depression in gular region, the depression distinctly longer than wide, shining; anterior border of depression carinate, with two obtuse teeth; posterior border simple, with one thick and long seta. Eyes well developed, each composed of 10-12 ommatidia. Maxillary palpi long (Fig. 1b), almost as long as antennae, palpomeres II–III granular, palpomeres IV with dense, short and recumbent setae. Antennae (Fig. 1b) short – 0.43-0.44 mm; scapes longer than wide (0.09-0.1/0.04-0.05 mm), with a small tubercule in anteromesal part; pedicel globular (0.034/0.034 mm); antennomeres III slightly longer than wide (0.025/0.022); antennomeres IV – VIII about same length (0.017/0.025 mm each); antenommeres IX wider than long (0.043/0.017 mm); antenommeres X wider than long (0.067/0.017 mm); XI longer than wide (0.12/0.068 mm). Pronotum convex (0.27/0.30 mm), widest part before middle, covered with dense, long, semierected setation; disk shiny; lateral antebasal foveae well-defined, connected by well-defined antebasal sulcus. Elytra wider than long (0.510/0.425 mm) each with two basal foveae, sutural stria well-defined through whole length of elytron; covered with long, golden and semierect setae, with deep and irregular punctation. Abdomen slightly narrower than elytra, covered with a long, semierect setae, first two visible tergites of same length. Legs long and slender, protibia simple, metatibia with strong spur in apical inner part.

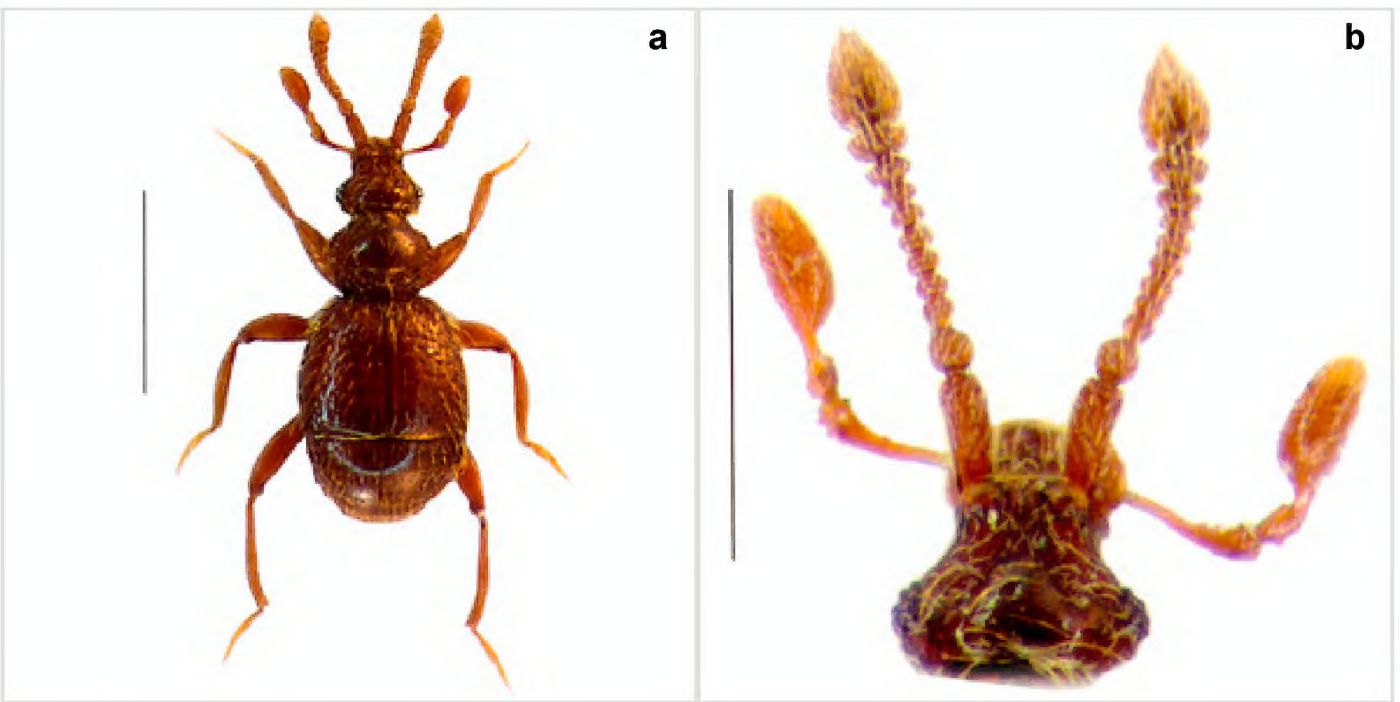

Figure 1.

Tychobythinus oculatus sp. n.

a: habitus, scale: 0.6 mm

b: head, scale: 0.3 mm

Aedeagus as in Fig. 2, length – 0.20-0.22 mm.

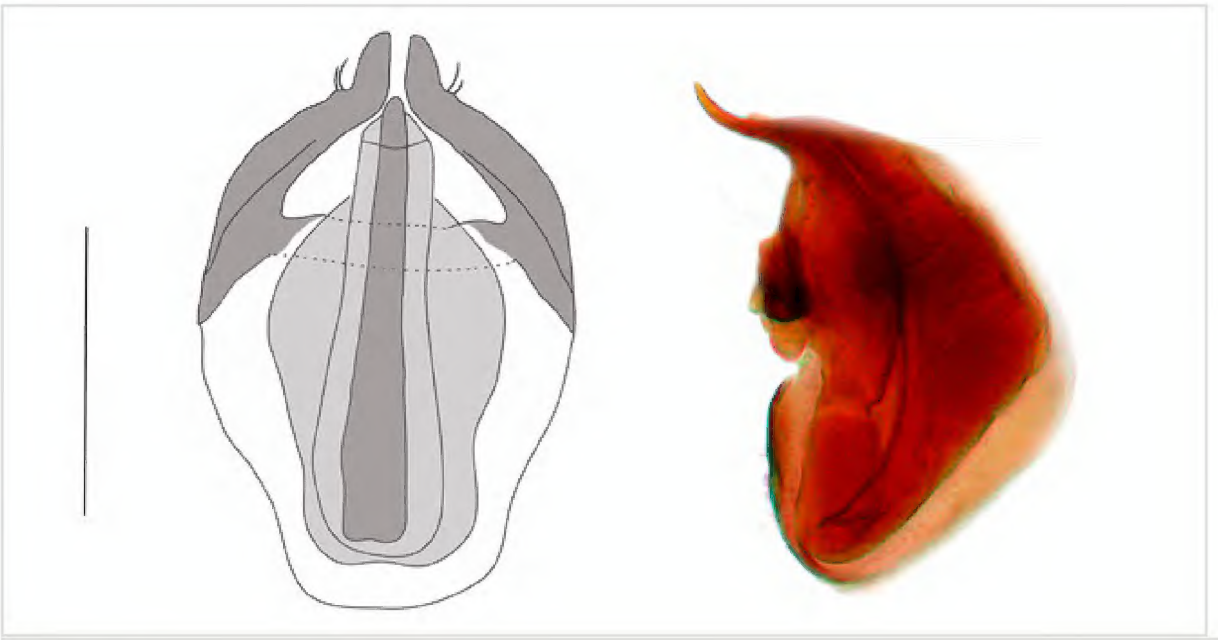

Figure 2.

Tychobythinus oculatus sp.n., aedeagus - dorsal and lateral view (scale: 0.1 mm).

Sexual dimorphism: The female is with a simple scapes, gular region of the head is without modifications, metatibia is simple.

Diagnosis

Tychobythinus oculatus sp. n. is morphologically closely related to *T. abnormipes* Reitter, 1910, and *T. pauper* Kiesenwetter, 1858, both from Greece, with which it shares similar shape of the scape (longer than wide, with a small tubercule). The new species clearly differs from *T. abnormipes*, and *T. pauper* by the very simplified internal armature of the aedeagus (in *T. abnormipes* and *T. pauper* the aedeagus has a long and crossed internal aphophyses), and by the shape of the gular depression (simplified and narrow in *T. oculatus*; wide and triangular in *T. abnormipes*; strongly modified in *T. pauper*). *T. oculatus* sp.n. can be readily distinguished from *T. vignai*, the only other currently known species from Turkey, by the presence of eyes (related to its way of life) and by the specific shapes of the antennae, gular region and aedeagus.

Etymology

Oculatus means ‘having eyes’, to distinguish it from the only other hitherto known species of *Tychobythinus* from Turkey (*T. vignai* Besuchet, 1987) which is eyeless.

Distribution

Turkey.

Acknowledgements

I want to thank Dr. Johannes Frisch, Joachim Willers and Bernd Jaeger for their hospitality and support during my visit in the Museum für Naturkunde der Humboldt Universität, Berlin, and to Volker Brashat for his critical reading and comments on the manuscript. The current work was supported by the SYNTHESYS Project (http://www.synthesys.info) which is financed by the European Community Research Infrastructure Action under the FP7 Capacities Program P7 (applications DE-TAF-2084).

References

- Besuchet C (1978) Le premier Psélaphide troglobie de la Turquie (Coleoptera). In: Sbordoni V, Vigna Taglianti A (Ed.) Fauna Ipogea di Turchia. 3. Circolo Speleologico Romano, Roma, 69-73 pp.
- Besuchet C (2008) Two new cavernicolous Bythinini from Greece (Coleoptera, Staphylinidae, Pselaphinae). In: Pavićević D, Perreau M (Ed.) Advances in the studies of the fauna of the Balkan Peninsula. Papers dedicated to the memory of Guido Nonveiller. Monograph No. 22. Institute for Nature Conservation of Serbia, Belgrade, 564 pp.
- Hadley A (2010) Combine ZP software, new version. ZP. Hadley. URL: http://www.hadleyweb.pwp.blueyonder.co.uk/
- Hlaváč P, Jalžić B (2009) Endogean and cavernicolous Coleoptera of the Balkans. IX. Notes on Tychobythinus (Coleoptera: Staphylinidae: Pselaphinae) from the Adriatic coast, with a description of a new species. Natura Croatica 18 (2): 221-228.
- Löbl I, Besuchet C (2004) Pselaphinae. In: Löbl I, Smetana A (Ed.) Catalogue of the Palearctic Coleoptera, Vol. 2: Hydrophiloidea - Histeroidea - Staphylinoidea. 2. Apollo Books, Stenstrup, 942 pp.